

Claims

I claim:

1. A method for sending a packet from a router to a network, the method comprising the following steps:
 - building a network packet;
 - wrapping the network packet in a LEX protocol wrapper, the LEX protocol wrapper having a LEX header and a LEX body;
 - transmitting the LEX protocol wrapper to a network extender using a communication link;
 - receiving the LEX protocol wrapper using the communication link;
 - interpreting the LEX header; and
 - unwrapping the network packet.
2. The method according to claim 1, wherein the building step further includes the following sub-steps:
 - building a packet header, the packet header having a destination address for a device on the network; and
 - building a packet body, the packet body having a sequence of data intended for the device on the network.
3. The method according to claim 1, wherein the LEX body includes a sequence of data for a network extender to redistribute onto the network.
4. The method according to claim 1, wherein the LEX body includes a control message designated for a network extender.

5. The method according to claim 3, wherein the unwrapping step further includes the following sub-steps:

unwrapping the LEX header from the LEX protocol wrapper; and
redistributing the LEX body as a network packet onto the network.

6. The method according to claim 4, wherein the unwrapping step further includes the following substeps:

unwrapping the LEX header from the LEX protocol wrapper; and
interpreting the LEX body as a control message.

7. The method according to claim 1, wherein the receiving step further includes the following substeps:

detecting the LEX header; and
separating the LEX header from the LEX body.

8. The method according to claim 1, the method further including the following steps:

sending a negotiation control message for directing the network extender to negotiate a set of parameters for establishing the communication link.

9. The method according to claim 8, wherein the sending step further includes the following sub-steps:

sending a protocol version value of a LEX protocol supported by the router;
sending a different protocol version value of a LEX protocol supported by the network extender; and

adjusting the communication link to apply a lower version of the LEX protocol supported by the router and the LEX protocol supported by the network extender.

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